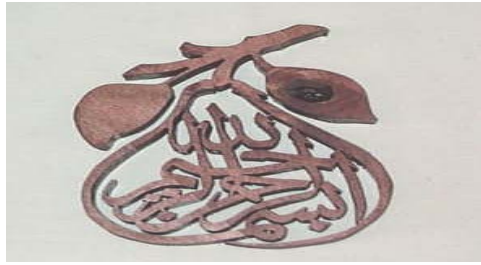


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Part B: From Question No. 39 up to Question No. 72

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Use the following information for questions 39 – 46

➔ From a sample of womens, we measure the number of times a women visited a doctor in the last two years as follows:

Number of Times	1	2	3	4	5
Number of Womens	15	10	8	4	3

Questions 39

The name of the variable is

Sol: Number of Times

Questions 40

The sample size equal

Sol: 40

Questions 41

The number of womens have been visited the doctor 3 times equal

Sol: 8

Questions 42

The number of womens have been visited the doctor 4 times or more equal

Sol: 7

Questions 43

The number of womens have been visited the doctor from 2 to 4 times equal

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Sol: 22

Questions 44

The largest value of the variable is

Sol: 5

Questions 45

The percentage of the womens have been visited the doctor less than 3 times equal

Sol: 62.5 %

Questions 46

The number of times a women has been visited a doctor height percentage equal

Sol: 1 (one)

Questions 47

The experiment is tossing a fair coin 3 times, then the number of the elements of the sample space equal

Sol: $2^3 = 8$

Questions 48

The experiment is tossing a fair die 2 times, then the number of the elements of the sample space equal

Sol: $6^2 = 36$

Questions 49

The experiment is selecte randomly with replacment tow ball and register their color (B=Black, R=Red) from abox having 2 black ball and 6 red ball, then the number of the elements of the sample space equal

Sol: 4

Use the following information for questions 50 – 56

→ 100 adults are classified according to the gender and their level of education in the following table:

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Gender Education	Male (M)	Female (F)	Total
Elementary (A)	31	7	38
Secondary (B)	16	15	31
College (C)	23	8	31
	70	30	100

If a person is selecte at random from this group, then:

Questions 50

The probability that the person will be Female (F) is

Sol: 0.3

Questions 51

The probability that the person will be Male (M) is

Sol: 0.7

Questions 52

The probability that he has secondary education is

Sol: 0.31

Questions 53

The probability that he has elementary education is

Sol: 0.38

Questions 54

The probability that he has elementary education and he is a male is

Sol: 0.3

Questions 55

The probability that the selected person has Secondary Education (B) given that she is Female (F) is

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$$\text{Sol: } P[B | F] = \frac{P(B \cap F)}{P(F)} = \frac{\frac{15}{100}}{\frac{30}{100}} = \frac{15}{30} = 0.5$$

Questions 56

The probability that the selected person has College Education (C) given that he is Male (M) is

$$\text{Sol: } P[C | M] = \frac{P(C \cap M)}{P(M)} = \frac{\frac{23}{100}}{\frac{70}{100}} = \frac{23}{70} = 0.32857$$

Use the following information for questions 57 – 58

➔ Two machines A and B make 80 % and 20 % respectively, of the products in a certain factory. It is known that 5% and 10% of the products made by each machine, respectively, are defective (D). A finished product is randomly selected:

Questions 57

The probability that the product is defective equal

Sol: 0.06

Questions 58

If the product was found to be defected, the probability that it was made by machine B

Sol: $P[B | D] = 0.333$

Complete the following

Questions 59

${}^5C_5 = \dots\dots\dots$

Sol: 1

Questions 60

${}^5C_0 = \dots\dots\dots$

Sol: 1

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Questions 61

$${}^5C_1 = \dots\dots\dots$$

Sol: 5

Questions 62

$${}^{10}C_4 = \dots\dots\dots$$

Sol: 210

Use the following information for questions 63 – 69

➔ Consider the discrete random variable X with the following probabilities:

x	$P(X=x)=f(x)$
0	0.6250
1	0.1875
2	0.1250
3	0.0625
Total	1

Questions 63

$$P[X=0] = \dots\dots\dots$$

Sol: 0.6250

Questions 64

$$P[X \geq 2] = \dots\dots\dots$$

Sol: $P[X \geq 2] = P[X = 2] + P[X = 3] = 0.1875$

Questions 65

$$P[X > 2] = \dots\dots\dots$$

Sol: $P[X > 2] = P[X = 3] = 0.0625$

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Questions 66

$$P[1 \leq X < 3] = \dots\dots\dots$$

Sol: $P[1 \leq X < 3] = P[X = 1] + P[X = 2] = 0.3125$

Questions 67

$$P[X \leq 2] = \dots\dots\dots$$

Sol: $P[X \leq 2] = P[X = 0] + P[X = 1] + P[X = 2] = 0.9375$

Questions 68

$$P[X=3.5]=\dots\dots\dots$$

Sol: $P[X=3.5]= 0$

Questions 69

$$P[X \leq 10] = \dots\dots\dots$$

Sol: 1

Use the following information for questions1 70- 72

→ Suppose that we have the following:

x	<i>Frquency</i>
0	20
1	55
2	12
3	13
Total	100

Questions 70

The value of $P[X=3]=\dots\dots\dots$

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Sol: 0.13

Questions 71

The value of $P[X=1]=\dots\dots\dots$

Sol: 0.55

Questions 72

The cumulative probability at the value 2 is

Sol: $P[X \leq 2] = 0.87$

With My Best Regards

Dr. M. Kayid

